

Amendments to the Specification

Please replace paragraph 11 spanning pages 3 and 4 with the following paragraph:

For example, the displacement device can displace at least one of the winding devices. Alternatively, the displacement device can be a dancer roll or an angular displacement arm that is in contact with at least one of the web paths. The displacement device can travel along a linear or a curved trajectory. The displacement device may displace at least one of the web paths in relation to a tangent plane at a web-contact point on the cylinder. The displacement device may be capable of maintaining the web path substantially in the tangent plane to minimize web tension loss at the cavity edges.

Please replace paragraph 37 on page 8 with the following paragraph:

The displacement device 200 may optionally have a base 215 that is disposed on a surface in the cavity 180. The device 200 causes the axis 202 of the supply spool 140 to move with ~~in~~within a frame 219 in fixed relation to the base 215. As the supply spool 140 moves in the direction of arrow 216, the feed path 160 gets closer to the tangent plane 210, and less web tension is lost at the contact point 205. Conversely, as the supply spool 140 moves in the direction of arrow 218, the feed path 160 gets farther away from the tangent plane 210, and more web tension is lost at the contact point 205. Therefore, the frame 219 can be designed to set limits that correspond to a range of desired tension adjustments. To minimize web tension loss, the feed path 160 is ideally in the tangent plane 210. However, in some applications, such as where another cylinder surface is in rotational contact with the cylinder 100, it may be necessary to retain the surface of the winding device within the cylinder's circumferential envelope. In those cases, the displacement device 200 can move the feed path 160 as far as it can in the direction of arrow 216, such that the feed path 160 is substantially in the tangent plane 210. Moreover, the curvature of the edge at the contact point 205 may be contoured to bring the tangent plane 210 closer to or within the cylinder envelope. It should be noted that the displacement device 200 described above can be similarly constructed to displace the uptake spool 150.

Please replace paragraph 43 on page 10 with the following paragraph:

Referring now to FIG. 4, a block diagram is shown to illustrate a method and its corresponding system embodied in the invention. In an initial step 400, a sensing device detects a variable that indicates web tension. For example, the sensing device can be sensors associated with the cylinder's circumferential surface that detect the normal load applied by the web against the cylinder's surface. Then, the sensed data is processed against a set value in step 410. That set value may be a single value or a range of acceptable values. If the detected variable is at the set value, the system goes back to the detection step 410 and follows rest of the protocol. These steps can be repeated indefinitely until the detected variable, e.g., normal load, is no longer at the set value. If the detected variable is not at the set value, a step 420 is taken to adjust the web tension, causing the detectable variable to change. The adjusting may be performed by the displacement device. The adjusted variable is detected by the same sensing device (step 400) and processed by comparing at the set value (step 410). Again, further adjustment is made if the variable is still not at the set value. Otherwise the protocol loops back to the detection step 400 and continues down the protocol. As a result, an automatic system is provided that can monitor the normal force continually or intermittently at a preset interval.

Please replace paragraph 46 on page 11 with the following paragraph:

Still referring to FIG. 5, a computer system 530 receives signals from the sensor 300 via the cable 520 and the data bus 501. The computer system 530 includes a processor and, typically, volatile and non-volatile memory for data storage. The computer system 530 may also include analog-to-digital (A/D) circuitry to convert the analog signal from the sensors 300 to digital form for analysis, and any additional circuitry necessary to operate the sensors 300 — e.g., a voltage or current source in the case of FSRs. Alternatively, such circuitry and/or measurement and/or A/D circuitry may be housed in a device (not shown) physically separate device 540 from the computer system 530. The computer system 530, which may be a personal computer, typically stores digital data in the memory and is programmed to calculate the normal load or web tension from the data received. The computer system 530 then compares the calculated value to a stored set value, which can be a range of values, and generates a signal output in digital or analog form corresponding to the adjustment in the web tension that should be made. In other words, if the calculated value, which is related to the web tension, is at the set value, the computer system 530 generates a signal that no action is required or simply does not generate an action signal. If the calculated value is not at the set value, the computer system 530 generates a signal for tension adjustment.

Please replace paragraph 65 on page 16 with the following paragraph:

Press 910 includes a print cylinder or drum 912 around which is wrapped a lithographic plate 913 whose opposite edge margins are secured to the ~~plate~~ ⁹¹³ cylinder 912 by a conventional clamping mechanism 912a incorporated into cylinder 912. Cylinder 912, or more precisely the plate 913 thereon, contacts the surface of a blanket cylinder 914 which, in turn, rotates in contact with an impression cylinder 916. The paper sheet P to be printed on is mounted to the surface of cylinder 916 so that it passes through the nip between cylinders 914 and 916 before being discharged to the exit end of the press 910. Ink for inking plate 913 is delivered by an ink train 922, the lowermost roll 922a of which is in rolling engagement with plate 913 when press 910 is printing. As is customary in presses of this type, the various cylinders are all geared together so that they are driven in unison by a single-drive motor.